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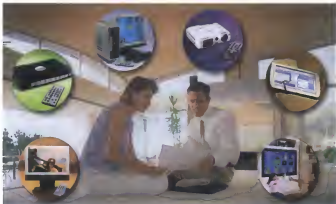
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Hey, good looking!



FROM THE EDITOR

with what types of connections and devices we access the online world.

The constant pulse taking has revealed a skepticism about the Web: users give less weight to news from online sources, have a reluctance to give out personal information over the Internet, and a resistance to purchasing products and services online.

A point project by Stanford University's Persuasive Technology Lab, Consumer Web Watch (consumerwebwatch.org), and Street Babel Design LLC indicates that, though skeptical, we may not be very discerning. The November 2002 report on how users evaluate the credibility of a Web site followed as the basis of an April 2002 telephone survey by Consumer Web Watch that indicated how much weight users give to a site's credibility.

Do as I say not as I do

The latter study found that, although credibility does not stand in the way of people going online and using a

Visit a Web site, and your use is clocked and monitored; some have pop-up windows asking you to participate in online surveys; and then there are the academic researchers and professional pollsters who generate reports on how, why, where, and with what types of connections and devices we surf the Web.

variety of Web sites, credibility was stated as key factor in why users went to one site and not another.

The researchers also found that respondents wanted "privacy policies, credit card protection policies, and items to important facts about who runs a site." Given these preferences, more than half (57 percent) of the 1,300 U.S. Internet users surveyed, said they read all or most of the policies designed to protect their credit card information, about 35 percent read all or most privacy policies, and about 22 percent said they took the time to read all or most of the information about the operators of a Web site. More than 70 percent of the respondents had accessed that information at some site at some time on another.

Despite the stated desire for credibility, the Stanford University researchers found that at practice the 2,684 respondents in its study did not use rigorous criteria to determine if (Participants logged onto a Web server

and were asked to judge and comment on the credibility of two live Web sites in one of 10 content categories. Though most were American, the study did include participants from 29 other countries.¹ In practice, participants almost never referred to a site's privacy policy, according to researchers.

Visual cues.

The report says "the average consumer paid far more attention to the superficial aspects of a site, such as visual cues, than to its content." Roughly 96 percent based their assessment of credibility on a Web site's overall design, including its layout, colour palette, and the size and type of fonts used. These design elements were given more weight for finance, search engine, travel, and e-commerce sites, and less weight for health and news Web sites.

In their conclusions the researchers emphasize the need to better educate users about the Web—especially if information found there is being used to make health, investment, or purchase decisions.

Another conclusion could have been that the virtual world is not very different from the physical world. It's populated by human beings, which—as many studies have shown—are known suckers for a pretty face.

Johnston, Robert. 1992. *Edible*.



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Graphics on the go

Travels with the Tablet PC

The ultraportable, technically sensitive Tablet PC family continues to grow. In 2001, for signing digital artists, is there an ideal tablet for your mobile graphics needs?

By Jeff Evans

I carry a black hardcover sketchbook with me whenever I go, partly to take written notes for work, but usually to draw—sketches of people, city scenes, and stories. Ever since I began to use computers over 20 years ago, I've been very interested in using PCs for art, animation, and publishing, and I've also been very interested in graphics-tablet devices that allow the user to draw with a computer using a special stylus or mouse.

However, I've always found the traditional graphics tablet a poor alternative to the sketchbook, for two reasons. First, the tablet surface and the computer screen are in two separate places, forcing the drawer to watch the computer screen while his or her hand is moving around down on the tablet. This breaks the natural hand/eye/paper feedback loop that most artists use when drawing or painting, and the result is a more awkward way to draw than traditional media. As well, the fairly complicated tablet and PC setup is designed for a permanent desktop workplace, and is not very portable. Even if you take a small format tablet along with your notebook, it's not quick or easy to set up and use on the go.

Tablet PC: The artist's computer?

When the Tablet PC—a Microsoft-led initiative to develop an ultraportable, pen-based Windows computing platform—was formally unveiled in November, I was very excited by its potential as an art tool. My interest was piqued largely because the notion of the Tablet PC is that it integrates a graphics tablet with the notebook PCs LCD screen, and the entire Tablet PC is light enough to hold, carry, and draw on with a stylus, much like a traditional paper sketchbook and pencil. Though the Tablet PC is pitched mainly at the business market, its features would also seem to be inherently useful to the artist.



At last, I hoped, it seemed possible that a digital equivalent of my paper sketchbook might have arrived, with all the added advantages of access to graphics and Web or print publishing software, instant storage, networking, and Internet connectivity. To test the Tablet PC as a graphics tool, I asked several vendors for the loan of different Tablet PC models, and over the space of a couple of months, I tried five of them out, with a variety of graphics software and peripherals. Here's what I found:

Function follows form?

I had the use of four very different Tablet PCs: an Acer TravelMate 106, a Fujitsu S1400, a Toshiba Portege 3500, and an Electrovision Scribber. The four Tablet PCs' different form factors and features each had a surprising amount of influence on their ease of use and suitability for different graphics tasks. Rather than review each unit separately, I compared their features as they relate to the demands of mobile graphics. (For a more general technical review of Tablet PC hardware, see "Take a few tablets," in the February issue of PCP, online at www.cnet.com/pcp/online.)

Weight, screen, and comfort

Of the four tablets, the Fujitsu Stylistic S1400 was the heaviest and most comfortable to sit sketched, a reflection perhaps of Fujitsu's long history as a maker of Windows and DOS pen tablet com-

puters. The S1400 weighs about 1.8 kg (3.9 lb.), is slightly more than 2 cm (0.8 in.) thick, and has a 10.4-inch color screen with 1,024x768 resolution.

The S1400 is a pure slate computer, with a fixed, non-rotatable screen, and no built-in keyboard. It ships with a separate, lightweight wireless keyboard. It was very comfortable to grip securely and to draw on. The stylus pen that came with it was tailored to the unit with a cable a nice little feature, as one of the hazards of Tablet PC-ing is losing or breaking the stylus.

The Acer TravelMate C100, on loan from Microsoft Canada, was the first Tablet PC I tested, and it formed the basis for comparison for the others. At 1.1 kg (2.4 lb.), the Acer was about as light as the Portege, but comes with a built-in keyboard, and not a "convertible" screen, which I did have to rotate every time I needed to type on the keyboard. With the screen rotated for pen use, the C100 was almost as comfortable as the Fujitsu for holding and drawing.

The Toshiba Portege 3500 was the heaviest of the lot, at about 1.9 kg (4.2 lb.). That extra weight makes a noticeable difference in handiness when holding the unit, and I got tired faster when walking around holding it and sketching. However, it has a noticeably larger, 12-inch screen, which provided a bigger, more detailed view of pictures, and as we'll see, it is the only desktop replacement-class Tablet PC in our group. The

Scribber from Electrovision—a Canadian company that has a focused attention for its push that extend the run time of notebook batteries—is an odd, rather clumsy-looking device, with a rugged, industrial design quite unlike the elegant design of the three major brand-name tablets. The nearly 1.8 kg (4 lb.) Scribber has a 9.9-inch screen, and it lacks some regular notebook PC features (no keyboard or external monitor video port, for example). It appears to be designed as a "closed" business utility pen computer, much like Fujitsu's pre-Tablet PC Stylistic pen computer, rather than as a general-purpose notebook PC.

Display

For the graphics user, the default screen resolution (1,024x768) of all the Tablet PCs, and the physical size of the LCDs (10 or 12 inch) is a common limitation in any ultraportable sub-notebook. It means that when drawing on the screen with the tablet's stylus, very fine detail is somewhat limited. The Toshiba Portege 3500, however, has support for up to 1,600x1,200 resolution, using an external monitor. This is very handy for me back in the office, when editing digital photos, creating sketches, or composing documents with programs like Adobe PageMaker or CoreDraw.

Image processing power

Graphics professionals tend to be power users, always hungry for faster processing and more memory, particularly for high-resolution images and digital video. Here, all the Tablet PCs share a common constraint: they are based on Intel's mobile Pentium III processor, running at speeds between 800 MHz and 1.3 GHz, depending on current model configuration.

This is fine for many practical purposes (such as editing single images at the screen resolution of 1,024x768). Also, the entry-level Tablet PC configurations, with 256 MB of RAM, may be constrained when running several graphics programs at once or working on a very large image or video file. In our test, though, all the Tablet PCs handled

(Continued on page 36)

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The electronic pen arrives

By David Tanaka

As a computer technophile a couple of years ago, I was fascinated by a demonstration of a prototype electronic pen from a Swedish high-tech company called Anoto. The pen had an optical sensor near the ballpoint tip, and as you wrote with it, the sensor tracked, digitized, and saved the movements—*reducing electronic ink.*

Now, computer peripherals giant Logitech has put the Anoto technology into a retail product named the Logitech iPen (Personal Digital Pen). It is working with paper products companies such as Madefestiva (Cambridge-based), RM (stock notes), and FranklinCovey (organizers) who will supply the special papers the pen needs to do its job.

Pen to paper to bitmap

The surface of these papers has a fine pattern of dots (with specific positions



ing in relation to each other) that give it a slight grey cast. As you jot or scribble on the paper with the ballpoint pen, the sensor records the exact movement using the dot pattern as an X-Y coordinate system. According to the background documentation from Logitech, the sensor records 50 samples per second, and assembles the data into black and white bitmaps.

The paper, however, does more than just provide coordinates. It is an essential part of the organizing system. There are separate areas on the paper with guide lines and boxes similar to the optical character recognition areas you might find on a computerized questionnaire or form. These are iCLR (Intelligent Character Recognition) fields. You print the relevant information in these areas, one character per space, and the pen converts these inputs to ASCII text, which can subsequently be used for indexing, sorting, and searching the

notes—which themselves remain in bitmaps—once they are downloaded to a computer.

iCLR fields can contain dates, names, or index words or phrases. The pages also have checkboxes that trigger specific actions. For example, checking the reminder box would set the alarm in your computer when you downloaded that information from the iPen to your computer-based organizer. There's also a Done checkbox at the bottom of the note pages. The pen vibrates very briefly every time you check a box or invoke some other command, a tactile version of the Enter key.

Included in the Logitech product box are a half dozen ballpoint pen refills, so Pen software (Windows only), and a USB pen holder/cable that transfers the pen's contents to the PC whenever the pen is placed into the holder. The pen also ships with a pad of digitally

Continued on page 22

Using FranklinCovey iScribe

Another company supporting Logitech's iPen is Digital Pen iScribe, which sent us a sample of the digital ink-ready planner pages and software it sells under the iScribe brand. We could not find the iScribe listed on the FranklinCovey Web site but a FranklinCovey outlet in Toronto stocks a couple of units that it orders from the U.S. Presumably other Canada stores could order in too. The store quoted us a price of \$26.95 for FranklinCovey iScribe planner and software, and \$7.95 for a 50-sheet pack of iScribe notepaper.

We found the iScribe system has a cou-

ple of limitations. First, it works only with Microsoft Outlook (2003 or 2002 only), showing up as a new window Outlook. If you happen to use a different organizer, you're out of luck, but if you already use FranklinCovey software, you've probably settled on Outlook anyway.

You may be more disappointed, however, that only some of the information in the planner system is in Pen-enabled: namely the daily task list, appointments, and daily record of events. Moreover, you have to manually type in the subject of the appointment or task in order for it to be properly identified in the Outlook task

list. The rest of the Franklin Planner System—including the mathematical component that keeps it from being just another daybook—is not digitally enabled. For example, it would have been slick to use Weekly Gossip notes or your journal values or goal statements pop up randomly onscreen for inspiration.

Included is some iPen-enabled notepaper including email forms and plans, lists, and graphed paper. The small form has iCR fields into which you print the To and Subject information that the computer turns into ASCII text and places in the correct fields of the email message.

The notepaper settings are treated like standard in Pen documents, stored in the My iScribenotes folder and accessed using the Logitech reader.

In other words, they have no integration with the iScribe planner, other than the fact that the paper sheets are punched and dimensioned to fit with the other planner pages in the same binder. Nevertheless, the notepaper is quite convenient because you don't have to carry a separate Cambridge notebook to use the electronic ink features of the iPen.

—David Tanaka

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< COMPUTING ON THE GO >

Graphics on the go

Continued from page 32

sketching and digital photo storage processing tasks quickly and easily.

Data storage and backup

As with most new legacy-free portable computers, the tablet makers have done away with the venerable floppy drive, offering differing approaches to backing up and storing files.

The Fujitsu Stylus ST4000 comes standard with a Type II PC Card slot and USB 1.6 connectors. Our test unit also came with an optional base unit with a CD RW drive and more USB 1.6 connectors. The hot-pluggable base unit is excellent, turning Fujitsu's single slate computer into a full-featured, networked desktop just by connecting it.

The Acer also came with USB 1.6 connectors and a PC Card II slot, plus a proprietary internal CD-ROM drive, which we found to perform somewhat erratically; it occasionally started clicking alternately, and would not spin up to full speed. We always got it to work eventually, by powering it off and back on, and by re-inserting the CD, but it was still a bit worrisome.

The Toshiba Portege 3500 had an internal CD-ROM drive, USB 2.0 connectors and a PC Card slot.

The Ectasyoys Scribbler appears not to have been designed for easy user modification: the PC Card slot and USB connectors are sealed under heavy rubber strips along the top and side, which tends to discourage tinkering.

We found the backup capabilities of the tablets with a USB 2.0-compatible Hewlett-Packard D1000-K drive, which worked beautifully with the Toshiba (and, to our surprise, it also worked, snugly, slowly, with the USB 1.6 Acer and Fujitsu tablets, even though the documentation inaccurately against using it with USB 1.6 devices).

We also used a 1 GB IBM microdrive, in its PC Card adapter drive, for backing up image files. Though somewhat slow compared to an internal hard drive, it worked well.

Networking, Internet, security

All four units were loaded with the Tablet PC version of Windows XP, so connectivity was a breeze. Simply connecting them with cables plugged into our home office hub put them on the network, with shared access to the high speed Internet and high-speed file sharing.

We found, though, that lacking a firewall on our home network, it was absolutely essential to put individual network security software on each Tablet PC, after being connected for a day or so without security software, all the tablets were infected with unwanted pop-up ads. As well, since both the Acer and the Toshiba tablets come with 802.11b wireless network adapters, you need to activate the wireless security features to prevent any 802.11b-equipped snoops from connecting to them.

On the silver hand, 802.11b compatibility is one of the best features for a Tablet PC, since it allows connectivity while roaming within range of a wireless access point. Printing files over the network was simple, and in practice, as long as there was a CD-RW drive on at least one computer on the network, backing up files was not a problem.

Camera input and printer output

We tested the tablets with a Fujifilm FinePix 9600 digital camera, and a Canon 5820D colour photo printer, and found that transferring, viewing, retouching, and printing digital photos was a definite strong point for the Tablet PC. Carrying a Tablet PC in our shoulder bag, we were able to download pictures from the camera to the tablet whenever the memory card on the camera got full, and we retouched, emailed or transferred pictures either by modem, macrodrive, CD-ROM or DVD-R, or via the home network, at will.

Software and hardware compatibility

Since the Tablet PC merely builds on the existing Microsoft Windows technology base and the XP operating system, we expected and found a very high degree of compatibility between the Tablet PCs and the broad spectrum of Windows-compatible hardware and software. We loaded a plethora of games onto our menagerie of tablets for our youngest child's birthday party, and they all ran, networked, on the first attempt. Microsoft laptopware models, including a wireless one, were simply plug-and-play, as were USB keyboards.


For photo retouching, we relied mainly on Adobe Photoshop Elements, which with its simple user interface was well suited to the smaller screen area of the tablets. However, we also installed and ran Photoshop and CorelDraw, and they worked at the speed you'd expect from a

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The new voice of BlackBerry

By Sean Connolly

Over the last few years, the BlackBerry has garnered a very devoted, if relatively small, group of adherents. It's not hard to see when it is designed to provide almost all of the functionality you can get from an electronic organizer, but adds the ability to send and receive email almost anywhere—and even allows you to surf the Net. The biggest problem with older models of BlackBerry is that you still needed to carry a cell phone, too.

The introduction of the BlackBerry 5810 was a step in the right direction, not only did this version have all of the functions of the older models, it added voice capabilities with the addition of a headset jack. That version could be web, word, however, because it meant you had to fish out your headset every time you wanted to take a call. Also, because it was only available for GSM networks, it wasn't an option for those already using CDMA or iX networks.

Research in Motion has now introduced the BlackBerry 6750, which solves both of those problems. First, the 6750 works on a CDMA 2000 1X network, which provides data speeds about five times faster than those found in Bell's old ARDS wireless network. (Because the ARDS network is scheduled to shut down after Jan. 1, 2006, or in early 2006, those with either the 650 or 670 will want to pay attention to this new model.) Bell is offering a migration plan that will put the

6750 into the hands of current BlackBerry subscribers for free, as long as they sign up for a two-year contract.)

The form factor of the 6750 is fairly similar to older BlackBerries, though a touch curvier. The keyboard looks the same at a glance, though the cradle key has been replaced by one that's more discrete. On closer inspection, you'll notice the "shift" characters have been rearranged to facilitate the reorganization of the numbers into a more traditional phone-style layout, one the left side of the keyboard. The BlackBerry-said keys mean it's a bit more difficult to dial than most cell phones, though definitely easier than if all the numbers were still along the top row, either way, you'll want to take advantage of the address book feature and push in frequently dialed numbers ahead of time.

The phone component is a lot easier to use on the 6750 than on the 5810 model, thanks to the simple fact that an expense and rechargeable are integrated right into the body. This means you don't have to deal with a headset if you don't want to, for those who prefer the headset, there's still a jack on the top. Sound quality is good, as long as you make sure to keep your ear lined up properly with the speaker.

The integrated Wi-Fi connectivity is a bit of a mixed bag. As before, the 6750 is ready to surf to a number of pre-installed optimized links. The device comes with two browser versions including the BlackBerry browser and a secure WAP

browser. Those who have used earlier BlackBerry models to surf to any site they wanted to may have a bit of trouble here, especially with sites that aren't WAP-optimized—using the WAP browser for viewing those sites almost immediately craps out the browser. If you choose to use the built-in BlackBerry browser, you may need to do some manual configuration, or you may want to opt for a third-party browser altogether.

One other note for those moving up to this model from the older BlackBerry is that paging functionality has been removed now that the phone component is included; the other alternative (if you don't want to have to talk to people) is to give out your mobile email address instead of the phone number.

Because the BlackBerry 6750 is both a phone and a wireless email device, it uses much more battery power than the pager-style BlackBerry of yore, which means you'll have to pay more attention to how much juice is left in its internal battery. Thankfully, the manufacturer (Research in Motion) has done a couple of things to help.

First, the package comes with both the regular sync/charge cradle, and a travel charger adapter, which comes with a few different wall tip converters. As well, the lithium ion battery is both user-accessible and removable, which means that if you get your hands on a second battery you can always change both inside the unit before heading out on



BlackBerry 6750

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any extended trip. At the very least, it will assure that when the battery finally expires from repeated recharging, you will be able to replace it yourself instead of sending away the whole device for servicing. ☐

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The electronic pen arrives

Continued from page 41



enabled 5M Pixel-It notes and one Cambridge Digital Notebook, which lets the convenience of being the first scribbler. I've seen that comes with operating instructions (explaining how the ICR fields work, and providing practice pages).

In use

Once you load the in-Pen software and connect the cable to the PC's USB port, the device is ready to use. The Cambridge notebook recommends that you train the pen to understand your printing by inputting letters, numbers, and punctuation into the ICR fields on the practice page. Once done and saved with the desktop software, the preparation stage is over, and you can just start using the pen and paper. It's really that simple. The only learning curve is remembering what happens when you check this or that dark box.

I've tried to escape from handwriting and over the past several years made serious attempts at Palm's Graffiti, the duct-tape keyboard on Windows CE handheld computers, and thumb keyboards on

BlackBerry and Treo devices. Throughout that period, however, I've never felt that I could completely abandon pen and paper. In fact, over the last load—say at a news conference or seminar where I need to quickly and continuously jot down notes—not comes pen and paper. The only thing that matches them for input efficiency is a full-size keyboard, but hunching out your notebook is not always acceptable or convenient.

If you analyze pen and paper as a portable technology, you'll be able to come up with a lot of impressive features. They are inexpensive, readily available, highly portable, easily replaced and replaced, generally acceptable and not require special skill beyond basic literacy—plus you never have to worry about batteries. Some of the

aspects of computers we really value, like cutting and pasting, is a word processor or the ability to have multiple pages of dynamic information open on the computer screen, are modified after the way we've long worked with pen and paper.

Which brings us to the Logitech Digital Pen. Although it doesn't match some of the criteria above (it's not cheap and you do have to worry about battery recharges), using it is definitely an interesting experience. It works mostly as advertised. The ability to index handwritten notes with keywords and dates adds a digital twist to pen and paper.

But in one way—esthetics—it's a bit of a disappointment—all that technology to create something that looks like a hand-scratched file. Time to crawl in penmanship 101. □

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» COMPUTING ON THE GO »

Don't keep all your eggs in one hard drive

By Geoff Wheelerlight

So you've taken the plunge and entered the world of mobile computing. You've been intensely using your notebook computer for creating, reviewing, and writing email, getting a grip on your finances, organizing your address book, keeping track of all your appointments, storing all the photos you've taken with your digital camera, keeping lots of MP3 music files on hand, and perhaps even trying a little video editing.

In fact, you now have lots of important information on your computer's hard disk—precious family photos, favorite songs, addresses, business correspondence, and email—that you would really rather not lose. If something were to happen to your notebook computer now (such as being dropped or stolen), you would stand to lose a lot more than its meager cost; it could be replaced or repaired.

The dangers of mobility

I know this to be a fact because I have had several notebook computers stolen over the years and have made the mistake of dropping a couple. The worst of these "dropping" accidents was at the international airport in Houston, Tex., where I had placed my notebook computer on top of a luggage rack; then slipped it open to check details of my schedule (which was stored as a document on the notebook). At that very moment I heard the commencement of my flight and swung around to look at the departure screen to check which gate I had to rush to, and in doing so, knocked my notebook computer with my carry-on bag to the airport's marble floor with a sickening crash.

There were many lessons to be learned from this particular incident—and I don't intend to go into all of them now—but the principal thing I took away from it was that the data on my notebook computer is almost always going to be more important to me than the notebook itself. With the right insurance and a good warranty—and a friendly neighborhood computer repair shop—getting physical repairs done to a damaged physical need not

be too much of a nightmare.

But if you haven't made regular backup copies of the data that sits on the notebook, that's a whole other scenario. If your hard disk is the only place that your vital business or personal information lives, then you are going to be pretty upset if that hard disk gets damaged and you lose that information forever.

As a minimum, you'd have to re-create it. While that isn't the end of the world, there are some things—such as family pictures taken at birthdays, Christmas, or special events—that you just can't re-create. If you haven't made backup copies of your digital pictures, or at least pointed them out, they are likely to be lost forever.

There isn't any one magical technology that you can point to as the instant backup solution for everyone and anyone. To start with, it really depends on a great deal on what—and how much—you are backing up.

Be aware that this situation shouldn't just be limited to notebook computers. Handheld systems—and even mobile phones capable of storing data—should also be included in any plan for a mobile backup strategy (and the dangers inherent in not having one). For those who have decided to go completely digital with their address books, appointments, and task lists, leaving a personal digital assistant (PDA) that hasn't been backed up (or at least synchronized recently with a desktop computer) can mean they'll have to spend a lot of time reentering that information.

What's the best backup solution?

There isn't any one magical technology that you can point to as the instant backup solution for everyone and anyone. To start with, it really depends on a great deal on what—and how much—you are backing up.

If you don't even e-mail on your hard disk (and perhaps use a Web mail service, such as Hotmail) and you don't create a lot of documents containing large graphics, you may be able to back up everything in the "traditional" manner: floppy disks.

However, this is likely to be insufficient for most situations, given the range of file types that don't easily lend themselves to floppy disk backup: digital pictures, PowerPoint presentations, Microsoft Outlook email container files, MP3 music files, and even large spreadsheets.

If the total size of your backup is between 64 MB and 128 MB, you might get away with backing up to a solid state media device, such as a USB memory keypad. These are small enough to carry on a keychain, plug straight into the USB port of any Windows Me, 2000, or XP system and configure themselves as an additional drive, just copy files onto them, and they're available any time you plug the keypad into your computer. These solid state memory devices are priced according to capacity, usually about \$100 to \$150.

This is, however, an expensive solution if you want to do anything beyond making a regular copy of all your key data files (or if you actually want to "archive" it—i.e. make and keep permanent copies) of all your data files; you need to look at a more permanent storage medium. An optical storage medium—such as a data CD created with a CD-R or CD-RW drive—is probably your best bet for this. It provides more than 600 MB of storage per blank CD, which are available for around \$1 or less per disc.

CD-R and CD-RW drives are now available as moderately priced add-on options for most notebook computers, with some even offering dual-capability DVD/CD-RW drives that can play DVD movies and games, music CDs as well as create data and music CDs. And if you're willing to pay even more, you can buy a drive capable of burning DVDs—which will yield several gigabytes of storage. Unless you have huge video files or plan to store for too many years of email files on your notebook, this is probably a little more than you need. □

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Fine design distinguishes Compaq tablet

By Sean Carothers

At the launch of the Tablet PC, a lot of manufacturers showed off their versions of the technology, but one of the designs that caught our eye was Compaq's, while there were a number of slate models (screen only) and convertible models (either slate or with keyboard), Compaq's model was both, and neither.

The design of the TC1000 is very clever. It ships with a keyboard module that, when you want to use the notebook with keyboard input, forms a mini stand that serves as a base—the screen opens around and sits about a third of the way from the rear of the keyboard module, bringing it closer to you. The keyboard itself features a trackpoint-style controller and two mouse buttons located perfectly close to the edge of the base. There are two main downsides to this configuration: It's a bit awkward to try to



hold the unit in your lap if you want to use keyboard input; and unlike other models that are tagged "convertible," you can never close the TC1000 in such a way that the keyboard component protects the screen.

The good news is that 10.4-inch TFT

display doesn't need much protection, as it's already protected behind a fairly sturdy sheet of tempered glass. That way, when you have the unit in slate mode, you don't have to worry so much when you put it away in a carrying case. Even better, you can eject the keyboard module altogether when you want to use pen-based input only, and it'll tilt the TC1000 up by almost 1 cm (0.39 in.). There are still a few buttons along the side to help with navigation, including a scrollwheel, tab, and escape buttons, and a "C" menu designed to bring up Tablet PC configuration options like screen orientation.

That's all fine and dandy, but what's the performance of the unit like? Many of the other manufacturers are opting for the mobile Pentium III processor, but the Compaq unit instead opts for a 1 GHz Celeron processor from Transmeta, which is a bit of a mixed bag. The overall performance of the unit is pretty good most of the time, but we found it

was also subject to the occasional freeze-up, where it would take a few seconds to respond properly to input from the screen. It's hard to say whether that was the processor alone, though; the TC1000's 256 MB minimum onboard memory should keep the data flowing fairly well (some of the models come with 512 MB, if you need more).

When you're in true slate mode, there's still a lot onboard, starting with the hard drive (available in 30, 40, and 60 GB options). Next is the Intel PC Card slot, there's also a protective door along the left (short) side of the TC1000, which opens up to reveal two USB 2.0 ports, jacks for 10/100 Ethernet and a 56 Kbps modem, and a VGA port for connecting an external monitor. On the opposite side are the jacks for headphones and a microphone. Last, but definitely not least, with wireless networking all the rage, the TC1000 would probably not seem complete without built-in 802.11b wireless—thankfully, most ver-

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AMD's 64-bit Opteron keeps 32-bit compatibility

By Sean Currelly

Over the last year, there's been a lot of talk about the new 64-bit processor line from Advanced Micro Devices, codenamed "Hammer." AMD has now made good on that promise with the official launch of its new Opteron processor for both servers and workstations, at a special event held recently in New York City.

The big buzz about the launch isn't so much about the processor's 64-bit architecture. "We're not the first company to introduce a 64-bit processor, as you know," admits Marty Seyer, senior vice-president of AMD's Server Business Segment, but adds, "we are the first and only company to introduce a 64-bit processor that excels at running over 10,000 32-bit applications. This is significant."

That's quite possibly an understatement when you take a closer look. Intel has already launched 64-bit processors for high-end servers, under the Itanium



"We are the first and only company to introduce a 64-bit processor that excels at running over 10,000 32-bit applications."

—Marty Seyer

brand, but that processor will only run 64-bit applications, rendering all of your old 32-bit applications on that platform obsolete. That poses a serious problem to any companies that want to move up to the power 64-bit processors can provide, but who have legacy software in place that cannot be easily upgraded, replaced or discarded.

For that reason alone, many companies that may otherwise have moved to 64-bit processing have stuck with the older, compatible 32-bit technology.

AMD's president and chief executive, Hector Ruiz, recognizes that this will change. "The transition to pervasive 64-bit computing is really not a question of 'if' but when," says Ruiz. "New technology should not introduce new barriers, it should knock them down."

To meet the needs of both the 64-bit performance user and those who will need 32-bit backwards compatibility, AMD has introduced the AMD64 platform, which uses the x86-64 instruction set, the basis on the massive installed

base of current x86 users while allowing 64-bit code to work for the first time on the same machines, even simultaneously. The new Opteron processor features 130 million transistors in a space of 192 sq. mm, or as AMD founder Jerry Sanders puts it, "smaller than your smallest tin can," and uses a 130 nanometer silicon-on-insulator manufacturing process. This same technology will be used in the forthcoming Athlon 64 processor, which is expected in September.

As with the Athlon XP series of processors, the nomenclature of the Opteron processors may be a bit confusing, with AMD again pushing processor frequency to the side, emphasizing overall performance instead. The 230 series of Opteron processors are launching first, and are designed for two-way (dual-processor) configurations. The one-way 100 series and the eight-way 800 series will ship shortly.

One other emphasis with the new processors is the pricing, bringing 64-bit

Continued on page 38

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including everything from CRT to LCD displays. It also features plasma displays like this 42-inch model with its fairly striking silver and black bezel (hinged along the side, black on the front) and control buttons hidden discreetly on the underside. Because of the positioning of the buttons, you'll definitely want to spring for the stand, otherwise getting at the controls is exceptionally awkward (Of course, it's much easier to use the included remote control.)

The quality of the display is very good. There are a number of connections on the back for both audio and video (including two D-sub connectors). This is very convenient when it's being used for presentations, allowing it to connect to more than one computer at a time, so you don't have to swap display cables as often. A set of handles on the top edge, along the back, are helpful if you have to move the display.

The on-screen display menu looks very stylish, though some of the selections could be more clearly labeled (considering the large size of the screen, the cryptic abbreviations seem unnecessary). One really nice feature of this model is that the whole screen is designed to be used in either landscape or portrait mode, and the on-screen display menu can be re-oriented for either mode.

The best part of the whole package is a very aggressive price point: you can add the stand and it's still a lower price than some of the other plasma displays alone.

NEC PlasmaSync 42VPA

From: NEC Solutions (America) Inc.

www.necusa.com

Contacted price: \$25,200

Option	Model	Contacted price
Tabletop stand	PE5T12	\$445

Front and mount: PFM4PC

Cable mount: CMX

Speaker set: PE-SSP12

Price: \$25,200

Plasma screens are generally pricey, but the NEC PlasmaSync 42VPA is more expensive than the average. Part of the price is due to the fact that NEC is one of the more trusted names in display manufacturing, especially for the business sector. On the other hand, this is one of the more fully featured displays for its size, with extensive video and audio inputs for both multimedia and PC, which helps explain the higher price tag.

As with the other displays, the stand is optional. With the 42VPA, all of the buttons to control the display run along the bottom bezel, which means if you don't have a stand or a wall mount, you won't have access to the buttons. That's probably just as well, because just leaning the display against the wall is pretty risky.

With a price tag like this, you'd expect the quality of the display to be excellent, and it is. Though it has the same pixel pitch as other (more expensive) monitors, the PlasmaSync 42VPA has a great picture—even close up. The on-screen menu system isn't quite as friendly, and takes a lot of scrolling to change aspect modes, but the display easily handles multiple video input and picture sizes.

Just as the screen features several video inputs, there are also three audio inputs, so you can hook up multiple devices (taped out from a receiver, VCR, DVD player, etc.) without having to swap audio connectors. Though there aren't any built-in speakers, there are 16-watt speaker terminals included on the back, so you can hook up a set.

Panasonic TH-42PW45 UY

From: Panasonic (Canada) Inc. www.panasonic.ca

Contacted price: \$25,200

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Big screen for deep pockets

Continued from page 51

source the extra weight (unless you place it on something fragile) (in other words, don't put it on top of a TV stand) you may run into problems if you're planning to mount it on a wall, either in home or in a business. Make sure your mounting surface can handle the load, and, of course, that the mounting is secure. As with other plasma screens, this one has a 16:9 aspect ratio, which is perfect

for widescreen movies. The picture quality is generally very good, although it can be a bit blurry if you're too close to the screen. One real plus with this screen is its remote control, which makes it very easy to switch input sources or change the aspect ratio with the press of a button. Many of the one-touch features on the Sansing display require several steps in the on-screen menu or other manufacturer displays.

The ease of use of the SPL-6235, as well as the low price point, make this screen, in our opinion, especially for those who are planning to use the floor stand.

When you factor in the three-year warranty, the Taurus SPL-6235 becomes very attractive.

Also available, but not reviewed

For our first plasma display roundup, we asked a number of companies to participate, but for various reasons (not least of which being the fact that a plasma screen is extremely large and difficult to ship) we weren't able to get all of the models we'd hoped for.

Readers are encouraged to check out a few of the other manufacturers, as well as other models from the companies

who did participate. Below are a few model numbers for 43-inch plasma screens, but we've included the Web sites so you can scan through their complete plasma lines.

- Fujitsu, P16W430RH (www.fujitsupl.com)
- Hitachi, 43HD720 (www.hitachi.ca)
- Pioneer, PDP-6330HD (43 in.) (www.pioneerelectronics.com)
- Sony, WEGA XE42732U (www.sony.com)
- Viewsonic, PVM425 (www.viewsonic.com)

Duron 1600+ \$249		AMD XP 1800+ \$319		AMD XP 2200+ \$359		Celeron 1.7GHz \$309		Intel P4-2.4GHz \$489		Intel P4-2.66GHz \$529		USED LAPTOP	
840 MHz 1MB CPU 600 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		AMD Duron XP 1800+ CPU 700 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		AMD Duron XP 2200+ CPU 800 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		Celeron 1.7GHz CPU 600 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		Intel P4-2.4GHz CPU 800 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		Intel P4-2.66GHz CPU 900 KVM Main Board 10MB 7200 RPM 10MB Integrated Video/Sound/Modem Main Mouse ATX 300W Power		IBM ThinkPad T40 Laptop 1.4GHz CPU 1GB RAM 15.5" Screen \$499	
Options with systems		Master 8000 7200 HDD Master 12000 7200 HDD Seagate 8000 SATA HDD Seagate 12000 SATA HDD WD 40GB SATA HDD WD 60GB SATA HDD WD 80GB SATA HDD WD 100GB SATA HDD WD 120GB SATA HDD WD 140GB SATA HDD WD 160GB SATA HDD WD 180GB SATA HDD WD 200GB SATA HDD WD 220GB SATA HDD WD 240GB SATA HDD WD 260GB SATA HDD WD 280GB SATA HDD WD 300GB SATA HDD WD 320GB SATA HDD WD 340GB SATA HDD WD 360GB SATA HDD WD 380GB SATA HDD WD 400GB SATA HDD WD 420GB SATA HDD WD 440GB SATA HDD WD 460GB SATA HDD WD 480GB SATA HDD WD 500GB SATA HDD WD 520GB SATA HDD WD 540GB SATA HDD WD 560GB SATA HDD WD 580GB SATA HDD WD 600GB SATA HDD WD 620GB SATA HDD WD 640GB SATA HDD WD 660GB SATA HDD WD 680GB SATA HDD WD 700GB SATA HDD WD 720GB SATA HDD WD 740GB SATA HDD WD 760GB SATA HDD WD 780GB SATA HDD WD 800GB SATA HDD WD 820GB SATA HDD WD 840GB SATA HDD WD 860GB SATA HDD WD 880GB SATA HDD WD 900GB SATA HDD WD 920GB SATA HDD WD 940GB SATA HDD WD 960GB SATA HDD WD 980GB SATA HDD WD 1000GB SATA HDD WD 1020GB 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The LCD TV is A-OK

Continued from page 40
pelling, reasons to go this route, however. First, the modulation on this display is better than most plasma displays of similar screen size. Secondly, at 28 kg and 108x74 x330 cm (with the stand attached), it's lighter and easier to maneuver than a plasma screen. It's also more efficient when it comes with a maximum power consumption of only 220 watts, it's about 15W more less greedy than many 42-inch plasma displays, which means a much lower electricity bill at the end of the month when you turn it off at the end of the month.

The Fujitsu ED435W features a three-year warranty.

LG Flatron MW-36230

From LG Electronics Inc. www.lg.com

Screen size (diag.): 36 inches

Estimated price: \$1,000

Don't be fooled even though the Flatron MW-36230 is only 30 inches diagonally, it still plays big for most uses. This model is the largest LCD flat-panel in LG Electronics' current lineup, and it's designed to accommodate both multimedia and computer usage. Overall, the screen is 18.4 kg with the base on, and



when it's cranked face front, it's 75.9x36x18 cm, though you can tilt it backwards or forwards, the screen swivel through 360 degrees, allowing easy repositioning.

It features a 1,280x768 screen resolution, and a 3025 mm panel pitch, which means a smoother picture overall than with the Samsung 40-inch display, though admittedly the picture is smaller too. The screen supports HiDTV, both input and display, and has a wide 670-degree viewing angle, without any ghosting at the extremes, as you'll see on plasma. The screen isn't as bright as some others, with a rating of 450 candelas per square meter, but that's sufficient for smaller rooms where you have good control over the lighting. The contrast

ratio is 450:1. The back of the screen features connections for both D-Sub and DVI, giving you a choice for PC connectivity; it also comes with multimedia connections for S-Video, composite, and component video. There are menu buttons along the bottom of the screen that allow you to swap input sources, but it's a bit awkward, and you'll probably want to stick with the infrared remote.

Because it's smaller, the screen uses less electricity than a 40-inch plasma or LCD; in fact, it's only marginally more power-hungry than a 21-inch CRT display. For rooms where a 40-inch screen—as nice as that is—is overkill, this is a great alternative. The Flatron MW-36230 has a great picture, great input flexibility, and it is even better on power.

The screen comes with a one-year warranty.

ViewSonic NextVision N1700w

with VDP25 TV Module

From ViewSonic Corp. www.viewsonic.com

Screen size (diag.): 17 inches

Estimated price: \$1,299

Though ViewSonic offers a device that can turn any monitor into a multimedia device, it also sells the N1700w, a 17-inch

LCD monitor with a special port called the VXP. This port hooks up to an external breakout box that features a number of multimedia connections and a built-in TV tuner. At only 17 inches, it's not really a rival for the 30- or 40-inch models when it comes to replacing your television, but it will do nicely for someone with limited space, especially if you want a television that will double as a computer monitor.



On the PC side of things, the N1700w features both DVI and D-Sub input, apart to the VXP connector. There are all kinds of buttons on the back behind a pair of panels, keeping your main connections away from prying eyes (and fingers). When you connect the VXR to add cam-

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Internal Li-Ion Battery
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Internal Li-Ion Battery
2.6A G (4000/81/2500) \$ 999/5078

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Intel P4 C-1.7GHz (Celeron III) \$1229

15.8T 256MB DDR, 20G HDD, DVD/CDRW

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Intel P4 C-1.7GHz (Celeron III) \$1229

15.8T 256MB DDR, 20G HDD, DVD/CDRW

SAS Modern LAN, TV out, VGA, 4 USB Ports, 1 PCMCIA

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AMD 2400+

ASUS C8M 1AM

512MB SDR RAM

80GB 7200rpm HDD

LO 82x44x44 CDRW

1 AMR 10000 Drive

64MB 30 Min Speed

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Keying into Palm's Targem W

Continued from page 27

most Palm users, the layout can take some getting used to: the symbols aren't where you expect them to be, and some familiar keys are missing altogether. I've managed to hit Home instead of Return many times while using the Web browser, which shortens the entry session. Once you adjust yourself, keyboard input becomes second nature, and many users will find this type of input is faster than Griffin's

The Targem W uses the same USB sync cradle as all recent Palm models. The AC adapter that ships with it also features several converter taps to allow you to keep charged, even when you're in a foreign country. The Palm Targem W is compatible with Windows 95, 98, Me, NT, 2000, and XP; plus MacOS 9.1 and later and OS X 10.1.2 and later.

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The hardware is only \$399 when you

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Email marketing campaigns for small business

By Gerd Wöhrhansmidt

Small businesses have been heavily encouraged to develop an e-business strategy over the last couple of years—one that quite often involves leveraging technology to make their small business look like a big business. But the reality is that small businesses need to approach the development of any e-business plan in quite a different way than a larger business.

To start with, small businesses are—how can I put this—small, they're small. That means there are often only a few employees, a limited supply of cash, and not a lot of time to embark on experiments in new business models. Many small businesses have realized that they need to have email (if only as a way to answer queries from customers) and that it generally makes sense to have at least a modest Web site.

But things get a little murky after that—swish in good ideas and potentials and very short on specifics. One thing you'll hear quite often, however, is advice that suggests small businesses should use crash campaigns to market their products and services.

The email trail can be a long and winding road. The great strength—and the biggest weakness—of using email to carry out marketing for your small business is that it is easy to create, simple to send, and is delivered almost instantly.

This very ease of creation can also work against you since it is tempting to fire off communications to customers every time you have a bright idea about something that might appeal to them.



You can quite quickly create communications to customers and prospective customers, but this very ease of creation can also work against you since it is tempting to fire off communications to customers every time you have a bright idea about something that might appeal to them.

In fact, email marketing campaigns should be given just as much care and consideration as "real world" direct mail offerings. Most users are now highly familiar with the concept of junk mail—or "spam"—and they don't hesitate to hit the Delete key quickly when they see something that doesn't look very useful.

The ideal scenario, then, is to send cards to customers that are targeted, self-considered, and timely. A good example of such a campaign is the one conducted by Vancouver's Grouse Mountain ski resort.

The company has offered a limited-time, discounted ski pass every year for the past several years known as the "E3PLUG" pass.

Cruise Mountain sends out an HTML-based email (that displays as a Web page within the customer's email) that provides the details of the offer sometime in February—and then follows that up regularly in the weeks after informing customers of the refueling availability of the offer.

The result is that regular customers feel they are informed—and given a good crack at getting their pass renewed with a minimum of fuss. And Gracie Mountain is able to communicate directly with these customers in a very cost-effective manner. So there is definitely a "win-win" scenario within this strategy.

While it may be tempting to adopt a more gradual strategy towards targeting

small communications—one that involves mass e-mails to start with and then evolves to be more targeted over time—that strategy is a mistake. And it's a mistake because it squanders whatever interest your customers may have in your initial message.

It's important to estimate that if the first email communication a customer receives from your company doesn't grab their attention and establish itself as worthwhile, subsequent communications are likely to end up going straight into the Deleted Emails folder. In the world of email marketing, first impressions not only count, they are all-important.

It's not how many, but who

Another common myth about email marketing is that you should use it to blast anyone and everyone who might possibly be interested in your products and services. And I suppose that for the price of hitting the Send key, any business generated from taking this approach would have to count as a return on investment (ROI) for having created the email in the first place.

But if you really want to make email marketing effective, you are going to have to do better than that. In an ideal world, you would craft and adapt each email to suit the interests of the customer to whom you were sending it. And if you have a small enough base of customers and potential customers (per-

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Beyond Expectations

CaféPress opens new possibilities for small operations

By Brandi Isenline

Swag, bawls! and tchotchkes are some of the staples of modern business. You can't attend a trade show or a sales presentation without some logo-printed gift to present to your top clients. Even small shops promoting their businesses locally now have mugs, calendars, and t-shirts printed to build brand-name awareness and customer loyalty.

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CaféPress, www.cafepress.com
My Dog Murphy's Patriotic T-shirt, www.mydogsmurphy.com/
Big Street Local Store, www.bigstreetlocal.ca
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CaféPress up and online

But having such items printed in large volumes is time-consuming and costly. You have to get an artist to create and then copy up your artwork to CD, or bring your originals to the printer. You may have to pay setup fees and order a minimum of 50 to 100 items—just each item you wish to purchase. If you plan to sell your swag in a store or via the Web, you'll also have to have storage and staff to prepare them for purchase and shipping.

If you operate a small business it means you want to print hundreds of calendars, cards, shirts, or gift items.

You didn't it be better to simply upload your logo to a Web site and order a single shirt, or a dozen items perhaps, with out the wait, hassle, and expense? It's possible to do so now, through a Web service known as CaféPress.

CaféPress (www.cafepress.com) has taken the print-on-demand (POD) concept and applied it to a wide range of products: from t-shirts, mugs, calendars, jackets and baby clothes to coffee mugs, lunch boxes, calendars, and even underwear. In addition to the wide range of clothing, gifts, tchotchkes, and give-away items, CaféPress has recently added CDs, and will soon offer POD books. While the service is largely popularized by creative artists who want to create and sell products online, there are others who use the service can be valuable to a small business.

If your business in graphic design, you may find it helpful to integrate CaféPress into your customer service process. You can set up a CaféPress as a "thank you gift" for clients whose logos you design, or send them an affordable gift of a shirt or coffee mug featuring their new logo.



Looking for affordable uniforms for a small number of employees? Set up a shop with your company logo to create "kitchen uniforms" or aprons for your staff. Have a media appearance planned? Put together a newsletter with your URL on the front and wear it to your interview. Planning a charity event or political protest? You can raise funds and make a statement at the same time. Baseball jerseys are also available, putting the cost of custom uniforms well within reach of the average team player.

You can also use the service to create product prototypes at low cost. If you are considering adding a line of calendars, t-shirts or gift items, you can create a small number of calendars to present to your buyers, staff, or test out at your store. If you order 15 or more of a particular item, you qualify for a bulk purchase discount that brings the base price down further. Once an item takes off in popularity, or you obtain a large enough order, you can purchase from a traditional importing source at wholesale prices.

Artist Jerry "Bluesie" Schwesher manages the Pig Street Green House in New Orleans and has two CaféPress. "I have two links to CaféPress Shops on my Studio page," Schwesher says. "One for my art, and one for Cap'n T-Shirts. I put the guitar knob as the items. Not a big thing, just a fun thing for the guests."

Schwesher says the service lets him focus on the artwork, rather than having to worry about the marketing end of the process, and it provides him with unique memorabilia to offer his guests. "I bought

some t-shirt to see quality and I was pleased. I have since changed the way I offer any art and include the prints by CaféPress through my art studio page."

"I have had a wonderful experience with CaféPress," says Nathan Brady of My Dog Murphy's Patriotic T-shirts, who has been selling on CaféPress for two years. "I do not make enough for my wife and I to live on, but we surely cover enough kibble, toys, and vet visits for my dog Murphy."

Brady has put a lot of work into customizing his three shops. "I was one of the first users to create an entire CaféPress store that used only the CaféPress back-end features and not their Web interface. Until you place an order, you would not even know that My Dog Murphy is a CaféPress."

CaféPress programmer Marty McKelley has set up "c2shop," an easy-to-use CGI script for customizing CaféPress beyond the already flexible CaféPress interface. Nathan says c2shop is incredibly easy to install and use, and you can get installation help if you need it.

Larger companies can also use CaféPress for employee rewards and loyalty programs. Department managers can have custom shirts designed for staff competency or milestone programs.

The new on-demand CDs and soon-to-be-released POD books will open another range of possibilities for every size of business. Instead of having large runs of CDs and manuals produced for new projects, companies can print and order these items at a lower cost as demand requires. CaféPress is also work-

ing on POD comic books, which once available, can be used to produce small-run catalogs and magazines.

POD paperback books open a new realm of possibilities to people who want to document their lives, diaries, and letters. The service will allow them to create and share a perfect-bound paperback book with your children, grandchildren, and extended family.

As well, gift items, like mugs and baby clothes can be personalized with photos and messages. If you are not creative yourself, there is a fair of artists in the CaféPress discussion community who can turn your memorable photos and ideas into one-of-a-kind gifts.

Individuals CaféPress products do cost more than similar mass-produced products, but you can order one t-shirt, mug or tote bag without any preparation time or production time, which can save a lot of money for small-volume buyers. You pay only the base price, plus shipping charges (prices are all in US dollars). You set whatever markup you wish, and after you upload your logo or artwork, you can add any of more than 60 products to your CaféPress. T-shirts are printed using a dry sublimation process similar in quality to screen printing, with no image cracking, peeling, or fading. A 30-day money-back guarantee is offered on all purchases.

Once you have opened your CaféPress, you have access to a lively set of discussion forums. These groups are filled with active participants and volunteer moderators who will help you figure out how to improve image quality, tweak your HTML, and announce your CaféPress. There is a particularly helpful forum with tips and suggestions for promoting Web sites.

You may find that the CaféPress staff is not always immediately responsive to email inquiries, but the system runs itself for the most part, most questions are answered to the site, and they do have a toll-free number for contacting a service representative if there is a problem. Q

Brandi Isenline is a freelance writer, statistician, photographer and new technology junkie. You can write to her at bisenline@comcast.com.

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Migrating proves difficult

Continued from page B1

to the Mac, it can be imported into any browser. The exception is the current beta version of Apple's Safari, which as of this writing cannot yet import bookmarks from HTML files.

Email

Last month I mentioned Move2Mac, which goes a long way toward simplifying the process of moving email to a Mac. However, it comes up a bit short of a complete solution. Briefly, Move2Mac takes your POP3 settings and address book from Outlook Express and transfers them to the Macintosh Mail and Address Book applications, respectively. By using Netscape Communicator as a go-between, your email can be transferred to just about any application with its folder structure intact.

Unfortunately, that's only part of the story. It's probably more convenient for you to use your email client's built-in address book, and that's also the master of filters and signatures. The good news is that many email programs store their data files (or can at least export them) in

plain-text files, which are easy to import—or, with only a little effort, export. The bad news is that there's no easy way to transfer filters (with one exception) or signatures.

At least the address book is salvageable. Most email programs can export their address book in a Lightweight Directory Interchange Format (LDAP) text file, or at least in a text file delimited by tabs or commas. Endnote is an exception, but it's a simple effort to import its address book into Outlook Express or Netscape and export from there.

Incidentally, Endnote is the exception when it comes to several other functions as well. If you're going from Endnote for Windows to Mac Mail, you don't have to use Netscape as an intermediary, just copy the data files from Endnote's data folder to the Mac, and Mail's import function will convert them directly.

Endnote on the Mac is also the exception when it comes to importing (it has no dedicated address-book import function anywhere in the program), but it's still easy to work with. Simply copy the text version of your address book into the RichTextMaker folder (located with the

rest of your Endnote data) in the Home/Documents/Endnote folder. The text file has to be in the correct format, with each entry on a line by itself, in the form *alias name;address*—for example, *alias Emma emma@pubcom.com*. Names with spaces must be in quotes (e.g., *alias "Laura Treumann" ltreumann@com*). Endnote for Windows already stores its address book in this format, in a file named *MyAddress.txt*; other text-based address books can easily be converted to this format with a text editor and a little search-and-replace wizardry.

Finally, Endnote is the only program that makes it fairly painless to transfer filter settings—again, if you don't mind tinkering with text files. The two versions of Endnote use a slightly different syntax, but opening the Windows and Mac filter files (Filters.pcr and Endnote Filters, respectively) will give you a sense of the differences between the two. Depending on how important your filters are to you, it might be worth the time to put your search-and-replace skills to use.

One tip: open Endnote folders on the Mac in TextEdit, then copy and paste the

revised filter text into the file and close it. Simply creating or replacing Endnote Filters on the Mac won't work.

Palin software

Getting data from the basic four Palin applications (Data Book, Address Book, To Do List, and Memo Pad) from a PC to a Macintosh is simplicity itself—assuming you're using a Palin handheld, and it uses the USB port to synchronize. 1. Install the Palin Desktop application on the Mac.
2. Sync your handheld on the PC.
3. Sync your handheld on the Mac.

After this procedure you can sync between your handheld and either computer effortlessly—almost. Oddly enough, synchronizing with the Mac causes my HandSpring Visor to prompt me to meet it if I had previously synchronized with the PC. No data is lost, it's just an extra, slightly inconvenient step.

Things are a little more problematic if you use Palin Desktop without a handheld. First, there's this mind-boggling limitation: Palin Desktop for the Mac

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Pro versions of video, DVD editing packages to debut



At this year's NAB (National Association of Broadcasters) conference in Las Vegas, Apple introduced new versions of its high-end video editing and DVD creation packages. Neither is scheduled to ship for a few months yet, but demos were shown. Following are few details of the new versions. For a full breakdown on Apple's presence at the NAB conference, go to www.apple.com/home/articles/2003/09/nab/.

Final Cut Pro 4

Final Cut Pro has long been the video-editing standard on the Mac and one of the most compelling reasons for editors to switch to the platform. Although AVID systems are still popular in the high-end sector, AVID's Final Cut competitor, Fusion DV, has thus far not made much of a dent in the Mac market. Final Cut Pro 3, while still considered one of the best non-



linear editing programs in its bracket, was also starting to feel its age.

Originally introduced in December 2001 for OS 9.2 and 10.1 and released at a time when the fastest Mac on the market was a dual-800 MHz or single-867 MHz system, it was time for an update. In version 4.0, Final Cut Pro gains extensive support for systems that use 1.6GHz G4 for faster CPUs and take full advantage of OS X's multithreading and improved multi-tasking, allowing much more real-time editing and effects—provided you have the hardware to back it up.

The interface is very much the same as 3.0, but with a number of new features, each of which is almost a program unto itself. The new capabilities built into Final Cut Pro 4 are Soundtrack, Cinema Tools, and iType.

Soundtrack gives you a complete audio editing suite within Final Cut Pro, where you can edit multi-channel soundtracks using the standard Final Cut timeline. It includes thousands of built-in loops and samples and is scalable to almost any resolution or number of channels. Soundtrack was almost certainly made possible by Apple's purchase of Enigmo and its Logic audio suite.

Another big part of Final Cut Pro 4 is Cinema Tools, which used to be available separately as an add-on to Final Cut Pro 3. Cinema Tools allows you to edit 24P and high-definition video in the same way you do digital video. Users create a proxy version of the footage that they work on in real time, maintaining a database linking it to the master footage, so that after cuts are made they can be applied back to the actual footage. Cinema Tools will work on

uncompressed digital video up to 1,920x1,080 resolution, and also includes tools to convert 29.97 frames per second (fps) NTSC to 24 fps using a reverse telecine process, or 25 fps PAL to 24 fps using a conform feature. In order to work on uncompressed 24P video, you will need to add hardware accelerators to your PowerMac in the form of PCI cards from the likes of Matrox, Hercules, or Digital Voodoo, as well as fast 10,800 rpm drives.



The last big new feature is iType. It allows you to create animated titles using special fonts. iTypefaces can contain animation and 3D bit-plane information, and can be used for creating complex title sequences or be used on top of video with

Continued on page 58

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DVD Studio Pro 2



Apple originally acquired DVD Studio Pro when it purchased Acetate during the NAB meeting in April 2000—a time when DVD authoring was in its infancy.

Over the years, Apple seemed to be putting more effort into its consumer-level iDVD product and ignoring the high-end DVD Studio Pro 1.5, for example, was essentially more bug fixes and support for newer systems. DVD Studio Pro 2, how-

ever, appears to be a complete rewrite, complete with a new slicker interface, many new features, and at half the cost.

iDVD Studio Pro essentially takes your video streams, audio streams, and menu files and allows you to sort them into a cohesive whole that includes navigation and content. The end user never sees the level of complexity behind a DVD, but it can be hundreds of still images, video, and audio clips in multiple titles and chapters. DVD Studio Pro takes a page out of the iDVD book by including a number of high-quality menu templates in the box.

A DVD Menu, when created manually, involves lots of text and image layers, usually created in Photoshop, or a similar digital image-editing package. With the templates in DVD Studio Pro 2, you can start with a nice looking menu, then customize any part to suit your needs: change the colour palette, buttons, or graphics, all in a fraction of the time it would take to create your own.

Of course, this is the professional DVD package, so it still includes an advanced mode that works more or less like the old version did. The big additions to workflow are that it now allows you to create menu templates that you can share with other

users, so several people can work on the same project and maintain a cohesive look. You can also create the menus within the program, instead of having to assemble the components externally.

Photoshop-layered files can be manipulated within DVD Studio Pro 2, and you can also create buttons and text much more easily thanks to the new GUI. In 1.5, you had to create the links between objects manually, but in the new version Apple has added what its calls Context Sensitive Drop Palettes. For example, drag a BackTime file onto the palette and a Back button will automatically be created with a link to the clip. To create a slideshow you need only drag a group of photos over a palette button and it will create a new button linked to the slideshow. It can also create a chapter index automatically based on chapter markers in your video.

Overall, the DVD Studio Pro 2 interface is a lot more like Final Cut Pro than DVD Studio Pro 1.5. Although it may seem a bit too user friendly it still has the advanced functionality pros are used to. It just makes DVD authoring a bit more approachable to those who are new to the industry.

Though iDVD 3 is a great program,

especially now that it has chapter marker support, it can't touch DVD Studio Pro. When it comes to encoding, DVD Studio Pro 2 includes support for mono and two-channel AAC (variable bit rate) encoding to create the highest quality video with the lowest bitrate. In comparison, iDVD uses a fixed bitrate encoder, which creates good quality but at the expense of disc space.

DVD Studio Pro 2 will now transcode your footage on the fly while you work—just drag a QuickTime file into your project and it starts encoding it. It also includes A-Rack for encoding compressed audio tracks into Dolby Digital 5.1 sound. With all this added functionality, DVD Studio Pro is a much more capable program than the version it replaces, and will link even more tightly with the new Final Cut Pro 4.

In addition to all this improvement, the price has fallen from \$1,599 to \$720. Some were expecting Apple to bundle DVD Studio and Final Cut in one package, but reducing the price is the next best thing.

You can now pick up both for around \$2,200 (currently, it would have run \$3,300). DVD Studio Pro 2 will run on any Mac that has a 64 processor. Mac OS X 10.2

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individuals' browser. The perceptual value modifies the full range of colours to match the colour output of the device, either compressing or expanding their actual colour values. It is called "perceptual" because the intent is to try and shift the colour values so that they all match each other even if the match is not exact—a red may become a pink, but a red and "red" after a fashion. Under this value, the gray balance is preserved. The relative colorimetric value takes the white value of the original and maps it to the white value of

the desaturation device, shifting all of the other colour values along with it in the process. The saturation value is meant to attain the "vividness" of colour values— it preserves the original saturation other than hue levels, so while a colour may shift towards green or red as its "increases" is retained. The absolute colorimetric value reproduces colours exactly, and converts one set of paint colours to the nearest possible hue. The inherent value taken on whatever parent colorimetric value was the nearest.

The following code snippet provides an idea as to how this future CSS3 property might be implemented by a Web author looking to reproduce unvisited colors exactly across other device styles (visiting intent, absolute color name):

But even with the rendering-intent property there will still be cases where you want to use a specific colour profile that goes beyond what this property can deliver. That is where the color-profile property comes in: it allows the Web

method to set a specific colour profile based on information you supply to it, or force the display device to use an sRGB Screen.

This property takes one of four values: auto, sRGB, a URI value and inherit. The auto value is the default, which is assumed to be an sRGB (short for "Standard Red Green Blue") format—which is the standard colour format for most major computing platforms. The specific sRGB value is there in case the

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Movies in the palm of your hand

By Eric Townsend

There are any number of reasons why you'd want to create video to watch on a PDA. It can provide supplementary instructions for complex, in-the-field procedures. You can watch the latest movie trailers on the train ride to work. Or maybe just because it's wicked cool, but first comes the all-important question: how do I squeeze a 110 MB AVI file into something I can take around in my pocket?

Whether you're looking at a Palm OS or a PocketPC-based handheld, the procedure is pretty much the same: run your original video file through some kind of conversion program, then save the converted file with your handheld. PocketPC handhelds have Windows Media Player built in, whereas Palm OS handhelds need some kind of dedicated player—usually from the same company that makes the converter.

For my tests, I converted four files:

3.5-minute music video (a 40 MB MPEG file), a 15-second video of my son Max crawling on the floor when he was a year old (an uncompressed 104 MB AVI file), a 30-second trailer for *Matrix Reloaded* (an 11 MB QuickTime file), and a 30-second Gap ad (a 2 MB QuickTime file). Aside from covering the most common source file formats, these four clips provided a fair amount of variety in levels of detail, motion, and color. The handhelds used were a Handspring Treo 90, and a Sony Clie PEG-N970—both of which run the Palm OS. (Next month I'll cover PocketPC software.)

TestMovie Encoder 3.51

From TestPoint Software, www.testpoint.com

Developer page: testpoint.com (download)

System requirements: Windows

OS: Windows 95/98/NT/2000

TestMovie Encoder can read AVI and

QuickTime files and convert them to a

proprietary format that can only be

viewed using the free TestMovie player

(In order to process the MPEGs, I first converted them to AVI files.) Its interface is functional and just a little clunky, but the program is reasonably flexible. On the main window, you're given the option of encoding just the video or audio component of a file, or even of combining video from one source and audio from another. The Audio window provides three checkboxes for compression, filtering, and volume adjustment.

The Video and Encoding Options windows are a little more advanced. In the Video Window, you can determine how the image will be framed on the handheld. This is an important feature because of the difference between a video screen and a Palm screen. Most video for TV is shot in a 4:3 aspect ratio (the frame is 33 percent wider than it is tall), and a film or DVD frame is 1.6:1. However, a standard Palm screen is 1:1, a square 160x160 pixels for 150x150 of you have a newer Palm.) You not only have to contend with the loss of detail at



such a low resolution, but how to fit the image properly.

TestMovie Encoder's resizing option allows you to scale the movie as its height or width completely fills the screen, or to any size between those extremes. Unless the source video is also square, this will either result in part of the image being cropped, or a letterboxing effect (the image shrinks so that nothing is lost, with black bars filling out

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In review: Red Hat Linux, IT certification guides

Guide takes the sting out of migrating to RedHat Linux

Red Hat Linux Administration
A Beginner's Guide



Authors: Michael Turner
Steve Shish
Publisher: NoStarch Press
ISBN: 0-9703362-5
Software: 2352 813 pages
Price: \$29.95

Information content: ****
Readability: ****
Overall rating: ****

intended for: Beginner/Intermediate

Increasingly, Linux is the alternative operating system of choice. An increasing number of corporate and desktop users are turning to this OS for many reasons: for getting up secure Web and email servers, for its extreme flexibility and power, or more simply as a low-cost, yet robust alternative to other com-

mercial OSs. Whatever the reason, Linux—and more particularly, the Red Hat “flavor” of Linux—is gaining popularity. But until recently, Linux has suffered the reputation of being a “user-unfriendly” OS, scaring some potential converts over things like its installation process or for dealing with those programs only available from a command line.

For these reasons, it may seem strange to twin the phrases “Linux Administration” and “Beginner’s Guide,” but to their credit, authors Turner and Shish have put together a book designed to take the sting out of migrating to Red Hat Linux.

This book takes a task-oriented approach to working with Red Hat Linux, its various modules looking at such things as installing Linux as a server, setting up Web and email server functions as well as using Linux for handling print services on an Intranet. It’s a lot to tackle, but it is the detail that the authors go into that really makes the difference with this book.

The task-based approach only goes into

as much detail as is needed to accomplish a specific goal. Initially, it seemed odd to introduce concepts like working with basic command line functions after looking at the fairly sophisticated concepts behind managing users on a system, yet it all works because the authors only introduce these tasks when they can immediately be put to use in a step-by-step manner.

In this way, the authors usher the reader through all of the processes necessary to accomplish otherwise daunting undertakings for Linux newbies, like installing and compiling new program packages, and dealing with the minutiae necessary to set up a system as a Domain Name Server (thereby making it visible to the Internet), and everything you need to know in order to set up the popular Apache Web server on your new Linux system. Both authors are seasoned Linux system administrators, and their many tips on avoiding pitfalls obviously come from that experience.

While the book only deals with Red Hat Linux 8, the changes introduced in ver-

sion 9 are not significant enough to bother the beginner being addressed in this book. If you are a Windows power user or spreadsheet looking for a good and practical introduction to using Linux, this book is an excellent introduction.

Good IT certification survey, but lacks “personal” touch



IT Certification Success
Authors: Ed Steel, Kim Lindros
Publisher: Que Corporation
ISBN: 0-7897-2523-7
Software: 2352 284 pages
Price: \$21.99

Information content: **** 1/2
Readability: ****
Overall rating: **** 1/2

intended for: Beginner/Intermediate

Continued on page 75



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In review: Red Hat Linux
Continued from page 27

Pretty much everyone who has done, or intended doing, any kind of computer certification has run across the Exam Cram series. The best idea behind these distinctive little red books is to provide concentrated info on a given certification topic, covering enough of its subject, to—hopefully—help the reader pass his or her certification tests.

IT Certification Success is a bit different. It is an overview of the current state of computer certifications available. It is aimed squarely at computer professionals

seeking certification, but who are unsure as to what to go after or how they rate.

Employers prefer people with IT certifications because it has proven to be a good return on their investment: they fix problems faster and without having to call upon as much costly outside support. Certifications also stand out on a resume and most are immediately recognizable to other IT specialists in the field.

Basically, IT Certification Success provides an overview in its 160 pages of a veritable alphabet soup of certifications like MCSE, A+, NCCO, CNA, DBA, CNA and plenty more.

To its credit, the book does a good job of navigating through it all and providing

a clear path to the various operations available: database management, operating systems, hardware, networking, and even how to teach these and many other technical subjects.

It also takes a hard-nosed look at the perceived value of these certifications in the IT world, which alone may be worth the purchase price for anyone seeking a certification path. My only problem with the book is that at times it looked a bit over-the-top. It is a pretty good survey of what certifications are available. Really did I get any real sense as to what it was like to go through an actual certification process?

It almost seems as though all you had to do was to breeze up by selecting a specific

Exam Cram? Certification guide, take the exam, and walk out with a piece of paper. In the real world it isn't that easy, and in most cases you must have a lot of experience or do a lot of work (not to mention taking courses) in order to achieve a desired certification.

While it does compile a lot of info into a single, easy-to-use book, these were times I wished it had gone a bit further and gotten more "personal." A good book if you want a survey of the types of certifications available and what they are worth, though you will need to look elsewhere to get a sense of the amount of time and effort required to achieve them.

—Keith Schenke-Habets

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Continued from page 26

The society sponsors educational seminars, conferences, and scholarships, as well as a job database and an annual salary survey (the U.S. and Canada) accessible to members only.

Membership includes subscriptions to the society's magazine, *Network*, and to *Technical Communication*, its quarterly journal.

Information Systems Security Association

Membership

Annual membership fees: US\$20 (student/

junior)

Annual dues: US\$40 (Student), US\$20 (Student/

junior)

(US\$2000)

The not-for-profit ISSA is based in the U.S., but has chapters around the world, including those in Ottawa, Toronto, and Vancouver. Membership is limited to

those working primarily in the area of information security, those providing products and services to the information security industry, and students and structures in information security.

The ISSA offers a 99-day, free trial membership to those who want to acquaint themselves with the organization before making a financial commitment. Membership fees are scheduled to increase July 1.

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The 3 GHz+ Centwood system used the Intel D895MB2 desktop, 512 MB of DDR400 memory, and the hard drive was connected via the motherboard's built-in controller. One of the 3.06 GHz Pentium 4 systems used a Gigabyte EP680 motherboard, 512 MB of DDR400 memory, and used the on-board SATA Serial ATA controller. The other 3.06 GHz Pentium 4 used an Intel D895MB2 motherboard, 512 MB of PC3066 DDRAM, and required a PCI-based Serial ATA controller from SSG. (Note the card was extremely flaky with this motherboard, often leaving at the SATA BIOS during boot-up. Once it finally booted, it seemed to work fine.)

The Athlon XP system used an Asus A7N8X motherboard, 512 MB of DDR400 memory, and required the PCI bus Serial ATA controller from SSG.

We tested each configuration with three different benchmarks. The first was FutureMark's PC Mark 2002, which measures the performance of the CPU, memory, and hard disk subsystems. We also used SiSoft's Sandra Pro 2002, which tests the CPU's arithmetic, integer

and floating point, and memory bandwidth capabilities. Lastly, we used BAPCo's SysBench 2002, which tests the system's ability to handle threaded applications both alone and together, which makes for a more real-world sort of benchmark. All tests were done independently in our Test Lab without supervision by any of the manufacturers or benchmark vendors, and as such none of them make any representation as to our results. What you see here is what we saw.

The results

A quick look at the results (see Processor Wars chart), especially from the three 3 GHz+ Pentium 4 configurations, shows a real speed lag. All four processors show very good results, though it's very clear that in most respects the Athlon XP is lagging far behind current Pentium 4 models using those benchmarks. It will be interesting to see how these numbers change when the new 64 bit processors start hitting the shelves. AMD pulled a serious come-from-behind maneuver when it introduced the Athlon, and certainly many

AMD supporters would like to see that happen again.

That said, AMD continues to offer fine value with the Athlon XP, especially with the recent price drop on the 3000+ Athlon XP processors tend to offer better bang for the buck at the high end of the line, and still offer more performance per megabyte than the Intel competition.

With the three Intel configurations, the advantage is less clear. All three are around the same performance level, with each configuration having certain advantages. The overall winner in real world usage is still the older 3.06 GHz Pentium 4 teamed up with DDRAM, most likely because of the configuration's higher memory bandwidth, something that will help when multiple appli-

cations are open and all putting demands on the memory.

Since the Centwood-ready Pentium 4 is only marginally more expensive than the older version at the point, it's a toss-up as to which offers better value for the money. Keep in mind that the new processor may not work in older boards, and vice versa, so if you're planning an upgrade, buy accordingly. (Of course, retail availability of DDR400 modules may still be an issue in some locations.)

We'll take a closer look at the motherboard used here at an upcoming issue, and we'll compare them with a few others. There are already a number of Intel R5P-based motherboards hitting the market, and new boards for the Athlon using Via's KT400A chipset. As always, stay tuned. □

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